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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/501,581	07/14/2004	Serge Haumont	60282.00190	9317
32294	7590	08/04/2005	EXAMINER	
SQUIRE, SANDERS & DEMPSEY L.L.P. 14TH FLOOR 8000 TOWERS CRESCENT TYSONS CORNER, VA 22182			LAM, DUNG LE	
			ART UNIT	PAPER NUMBER
			2687	

DATE MAILED: 08/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/501,581	HAUMONT, SERGE	
	Examiner	Art Unit	
	Dung Lam	2687	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 July 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 53-102 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 52-104 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 July 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>9/30/04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Information Disclosure Statement

1. The references listed in the Information Disclosure Statement filed on July 30, 2004 have been considered by the examiner (see attached PTO-1449 form or PTO/SB/08A and 08B forms.)

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims **53-54, 56-57, 60, 62-66, 67-68, 70, 71, 74, 80, 86-87, 89, 90, 93 and 99-101** are rejected under 35 U.S.C. 102(e) as being anticipated by **Ranta** (US Patent No. 6,584,331).

4. Regarding **claim 53**, Ranta teaches (see Fig. 1 and Abstract) a method of adjusting mobility management in a mobile communication network (5), wherein said mobile communication network comprising:

a mobility control unit (controller 120, Fig. 1) adapted to track location of communication units communicating in said mobile communication network and to control the mobility management for said communication units,

Art Unit: 2687

said method comprising the steps of providing said mobility control unit with mobility information related to a communication unit, evaluating the degree of mobility of said communication unit from said mobility information related to said communication unit (calculation of motion indicator $C(n)$ Fig. 3 and Col. 5, lines 40-47), and, when said step of evaluating indicates the immobility of said communication unit (positioning function to derive a value that is indicative of presence or absence of motion, Abstract),

adjusting, by said mobility control unit, values of timer elements of said communication unit and said mobility control unit to a maximum timer value or a timer value being higher than a default timer value said mobile communication network said timer elements defining a time period of a ready state of said communication unit and/or a time period for performing a location update for said communication unit (in the "reduced" mode the positioning systems output their position vectors less frequently than in the "normal" mobile state which means there is an inherent timer element that is adjusted to a longer period or higher value to perform the next positioning update, from Col. 8, lines 8-11).

5. Regarding **claim 54**, Ranta teaches a method according to claim 53 (see claim 53). Ranta further teaches said communication unit includes a specific information element indicating a periodic update timer value and/or predefined mobility management parameter (motion indicator $C(n)$, Col. 6 lines 63 – Col. 7 line 30) for mobility management elements of said communication unit and/or said mobility control unit, said periodic update timer value and/or predefined mobility management parameter being detected in said evaluating step.

Art Unit: 2687

6. Regarding **claim 56**, Ranta teaches a method according to claim 53 (see claim 53). Ranta teaches, wherein said adjusting step comprises a step (S80) of setting said timer elements of said communication unit and/or said mobility control unit to predefined changed periodic update timer values and/or predefined changed mobility management parameters (reduce positioning functions, Figure 3).

7. Regarding **claim 57**, Ranta teaches a method according to claim 53 (see claim 53). Ranta further teaches a step of disabling a function of the mobile communication network which is used to force a modification of an operation state of the communication unit (After a long period of immobility, both the cellular and the GPS positioning systems may be totally shut down. Col. 8, line11-13).

8. Regarding **claim 60**, Ranta teaches a method according to claim 53 (see claim 53). Ranta further teaches said mobility information related to said communication unit is provided from said communication unit (Col. 5, lines 37-46).

9. Regarding **claim 66**, Ranta teaches a method according to claim 53 (see claim 53). Ranta further teaches an adjusting step of the timer elements to set values which are incremented by a predetermined amount in comparison to the values set before (time increments are 10 minutes ... any of these values maybe adjusted according to the behavior of the MS during field and other types of tests, Col. 7, lines 55-60).

10. Regarding **claims 67-68,70,71,74 and 80** they define a mobility control unit, which corresponds to the method claims 53, 54,56, 57, 60 and 66 respectively.

Art Unit: 2687

Therefore, they are rejected for the same reasons as 53, 54,56, 57, 60 and 66 (see claims 53-54,56, 57, 60 and 66 above).

11. Regarding **claim 81**, claim 81 defines a communication unit, which corresponds to the combined method claims of 53 and 54. Therefore, it is rejected for the same reasons as claims 53 plus 54 (see claims 53 and 54 above).

12. Regarding **claims 67-68,70,71,74 and 80** they define a mobility control unit, which corresponds to the method claims 53-54,56, 57, 60 and 66 respectively. Therefore, they are rejected for the same reasons as 53-54,56, 57, 60 and 66 (see claims 53-54,56, 57, 60 and 66 above).

13. Regarding **claims 86-87, 89, 90 and 93**, they define a mobility management system, which corresponds to the method claims 53, 54,56, 57, 60 and 66 respectively. Therefore, they are rejected for the same reasons as 53, 54,56, 57, 60 and 66 (see claims 53, 54,56, 57, 60 and 66 above).

14. Regarding **claim 99**, they define a mobility control unit, which corresponds to the method claims 66. Therefore, it is rejected for the same reasons as 66 (see 66 above).

15. Regarding **claims 100 and 101**, they define a mobility management system, which corresponds to the method claims 53 and 56 respectively. Therefore, they are rejected for the same reasons as 53 and 56 (see claims 53 and 56 above).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

16. Claims **62, 64, 76, 78, 84, 95, 97 and 103** are rejected under 35 U.S.C. 103(a) as being unpatentable over Ranta (US Patent No. 6,584,331).

17. Regarding **claim 62**, Ranta teaches a method according to claim 60 (see claim 60). Ranta fails to expressly teach that mobility information includes a request for setting at least one timer element to a maximum value. However, Ranta teaches that after a long period of immobility, both the cellular and GPS positioning systems may be totally shut down (col. 8, lines 1-14) with the logic that if a mobile station is stationary then the previously made neighbor cell measurements most likely remain valid and need not be re-measured (Col. 1, lines 44-48), giving the suggestion that under immobility condition, the time period for performing the next positioning should be set at maximum.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention was made to modify Ranta's teaching to have capability of taking a request of setting the time period for performing the next location update to a maximum value to reduce power consumption and radio signaling resource.

18. Regarding **claim 64**, Ranta teaches a method according to claim 53 (see claim 53). Ranta fails to expressly teach an adjusting step of the timer elements to maximum

Art Unit: 2687

setable values. However, Ranta teaches that after a long period of immobility, both the cellular and GPS positioning systems may be totally shut down (col. 8, lines 1-14) with the logic that if a mobile station is stationary then the previously made neighbor cell measurements most likely remain valid and need not be re-measured (Col. 1, lines 44-48), giving the suggestion that under immobility condition, the time period for performing the next positioning should be set at maximum. Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention was made to modify Ranta's teaching to adjust the time period to perform the next location update to a maximum value to reduce power consumption and radio signaling resource.

19. Regarding **claims 76 and 78**, they define a mobility control unit that corresponds to the method claims 62 and 64 respectively. Therefore, they are rejected for the same reasons as 62 and 64 (see claims 62 and 64 above).

20. Regarding **claim 84 and 103**, they respectively define a communication unit and a mobility management system that correspond to the method claim 62. Therefore, they are rejected for the same reasons as claim 62 (see claim 62 above).

21. Regarding **claims 95 and 97**, they define a mobility management system that corresponds to the method claims 62 and 64 respectively. Therefore, they are rejected for the same reasons as 62 and 64 (see claims 62 and 64 above).

22. Claim **55, 69 and 88** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Ranta** (US Patent No. 6,584,331) in view of **Croft et al.** (US Patent No. 6078826).

Art Unit: 2687

23. Regarding **claim 55**, Ranta teaches a method according to claim 53 (see claim 53). Croft teaches that mobility information related to said communication unit includes previous location information and current location information of said communication unit, said previous location information and current location information being compared in said evaluating step to determine whether they are equal (Location circuitry compares the currently accessed base station ID to see if it matches the stored base station IDs Col. 4, lines 18-24). Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to modify Ranta's teachings to facilitate the mobility determine by simply comparing the current and last associated position without having to perform any complex algorithms.

24. Regarding **claims 69 and 88** they respectively define a mobility control unit, communication unit that corresponds to the method claim 55. Therefore, they are rejected for the same reasons as claim 55 (see claim 55 above).

25. Claims **58, 72, 83, 91 and 102** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Ranta** (US Patent No. 6,584,331) in view of **Pond** (US Publication No. 2004/0030601).

26. Regarding **claim 58**, Ranta teaches a method according to claim 53 (see claim 53). However, Ranta fails to teach that said communication unit is employed in a static device used for a M2M application. In an analogous art, Pond teaches a mobile device interacting with a proximity reader to verify user upon entry into a food establishment (Abstract and col. 11 paragraph 136). Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to apply Ranta's teaching of

Art Unit: 2687

mobility management in an M2M application by employing a static device as taught by Pond to reduce unnecessary location update signaling.

27. Regarding **claims 72, 83, 91 and 102**, they respectively define a mobility control unit, communication unit, and a mobile management system, which correspond to the method claim 58. Therefore, they are rejected for the same reasons as 58 (see claim 58 above).

28. Claims **59, 61, 63, 65 73, 75, 77, 79 92, 94, 96, 98 and 104** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Ranta** (US Patent No. 6,584,331) in view of **Kalliokulju** (WO 99/52306).

29. Regarding **claim 59**, Ranta teaches a method according to claim 53 (see claim 53). However, Ranta fails to teach that said mobility control unit is included in a core network control unit of the mobile communication network. In an analogous art, Kalliokulju teaches that the mobility management function is maintained both in the mobile device and in the core network SGSN (col. 5, lines 9 -14). Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to modify Ranta's mobility management to add a mobility control unit in the core network to facilitate and reduce signaling loads in the positioning and connection process.

30. Regarding **claim 61**, Ranta teaches a method according to claim 53 (see claim 53). However, Ranta fails to teach that said mobility information related to said communication unit is provided from a core network control unit of the mobile communication network. In an analogous art, Kalliokulju teaches that the mobility

Art Unit: 2687

management function is maintained both in the mobile device and in the core network SGSN (col. 5, lines 9 -14). Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to modify Ranta's mobility management to also be included in the core network to facilitate and reduce signaling loads in the positioning and connection process.

31. Regarding **claim 63**, Ranta teaches a method according to claim 60 (see claim 60). However, Ranta fails to teach that the mobility information includes a request for deactivating at least one timer element. In an analogous art, Kalliokulju teaches that an MS may transmit a request for disconnection from the network, changing the connection state from ready to idle. This change of connection state means the ready timer of the ready state is deactivated and the connection is cut off freeing up space and resource. (Col 16, lines 23-36). Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to modify Ranta's mobility management to have the flexibility to deactivate a timer element to move a different connection state and thus reducing unused resource.

32. Regarding **claim 65**, Ranta teaches a method according to claim 53 (see claim 53). However, Ranta fails to teach said adjusting step the timer elements are deactivated. In an analogous art, Kalliokulju teaches that an MS may transmit a request for disconnection from the network, changing the connection state from ready to idle. This change of connection state causes an adjustment of the ready timer of the ready state to be deactivated and the connection is cut off freeing up space and resource. (Col. 16, lines 23-36). Therefore, it would have been obvious to a person of ordinary skill in

Art Unit: 2687

the art at the time of the invention to modify Ranta's mobility management to handle a request to deactivate a timer element to save some unused resource.

33. Regarding claims **73, 75, 77 and 79**, they define a mobility control unit, which corresponds to the method claims 59, 61, 63 and 65 respectively. Therefore, they are rejected for the same reasons as 59, 61, 63 and 65 (see claims 59, 61, 63 and 65 above).

34. Regarding claims **85 and 104** they respectively define a communication unit and a mobility management adjustment system, which correspond to the method claim 58. Therefore, they are rejected for the same reasons as 63 (see claim 63 above).

35. Regarding claims **92, 94, 96, and 98**, they define a mobility management adjustment system, which corresponds to the method claims 59, 61, 63 and 65 respectively. Therefore, they are rejected for the same reasons as 59, 61, 63 and 65 (see claims 59, 61, 63 and 65 above).

Conclusion


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dung Lam whose telephone number is (571) 272-6497. The examiner can normally be reached on M-F 8 - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lester Kincaid can be reached on (571) 272-7922. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2687

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6/13/05
LESTER G. KINCAID
PRIMARY EXAMINER